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BFPR Creates Additional Carbon Monoxide Regulations
After months of subcommittee work and consultation with stakeholders, the Board of Fire Prevention Regulations (BFPR) promulgated additional regulations on the requirement for carbon monoxide (CO) alarms at its September 7, 2006 meeting. The board developed initial regulations on carbon monoxide alarms in one- and two-family homes and multi-family dwellings quickly after "Nicole's Law" was passed. It took longer to research the technical issues around adding carbon monoxide alarms in buildings with complex heating, ventilation and alarm systems.

What Types of Buildings Are Affected?
These supplemental regulations govern other types of residential buildings where people generally do not live permanently, such as hotels and motels, hospitals, nursing homes, and prisons. The new regulations will also affect day care facilities licensed by the Department of Early Education and Care; home day cares were already covered by the previous regulations. The previous regulations will govern small hotels, those with less than six rooms like a bed and breakfast. Only buildings with a potential source of carbon monoxide are affected.

Summary of the New Regulations
These newly regulated more "transient" types of residential occupancies must either install hardwired carbon monoxide alarms in every room and on every level, or adopt one of the six technical options for protection, labeled A-F in the regulation. The technical options allow owners to target the CO alarm protection only in those areas (i.e., rooms that contain boilers, hot water heaters, central laundry areas, and enclosed parking areas) that could be potential sources of CO. Most of these technical options include low-voltage wiring, monitoring (i.e., by an alarm company) and certain signal transmission requirements (notification to the fire department.)

What Are the Deadlines?
Owners of transient residential and institutional occupancies, and buildings owned by the Commonwealth and local housing authorities (i.e., public housing) have until January 1, 2008 to install CO protection. In certain limited instances, owner of large residential buildings who notified the local fire department by May 15, 2006 that they intended to take

advantage of a technical compliance option must complete installation by January 1, 2007. The March 31, 2006 deadline for where hard-wired is not required by the board remains unchanged.

Building Owner/Manager Responsibility
Any building owner or manager who wishes to take advantage of these technical options must obtain a permit from the fire department beginning December 1, 2006.

Additionally, the building owner or operator is responsible for the care and maintenance of the system. They must submit annually to the head of the fire department documentation of the inspection, maintenance and testing.

Emergency Plan for All Personnel
In addition, the building owner or manager must prepare a written emergency plan, available to all personnel and approved by the head of the fire department. There must be an annual review of the plan with all employees of their duties and responsibilities under the plan. Policies and procedures must be developed to communicate the situation immediately to the fire department. There must be an evacuation plan. A list of emergency contact information of responsible parties must be provided to the fire department.

Technical Options
A) Protecting the Rooms with Fossil-Fuel Burning Equipment
The rooms with fossil-fuel burning equipment must have an audible and visual hard-wired alarm in the room that is monitored, and retransmitted.

B) When Certain Kitchen Appliances are Only Source of CO
If the only potential source of CO is a gas kitchen appliance with an electric ignition (like a commercial stove in a dormitory dining area), there must be written certification from a professional engineer that it complies with the plumbing code and only operates when the ventilation is operating.

C) Integrated Shutdown Device
In rooms or areas with fossil-fuel burning equipment, a carbon monoxide alarm with an automatic shut down device can be connected to the equipment. Such a component can be wired to the furnace and shut it down automatically. There are certain signage and restarting restrictions as well.

D) Spaces Adjacent to Enclosed Parking
If the only source of CO is from an enclosed parking area, one option is to install alarms in the adjacent spaces. The alarm must be monitored, and retransmitted.

E) Enclosed Parking with Mechanical Ventilation Systems
This option is an alternative to installation carbon monoxide alarms in the spaces adjacent to enclosed parking. If an enclosed parking area has an automatic ventilation system, it must automatically operate when a sensor detects 25 PPM of CO and at 50 PPM set off a

supervisory alarm to the building's alarm panel; the adjacent spaces do not need carbon monoxide alarms.

If the enclosed parking area has continuous mechanical ventilation at the rate of 5 cubic ft/minute/person and 1.5 cubic feet/minute/square foot of floor area, and it has a sensor that ensures that airflow is in operation and the sensor monitors direct airflow and will set off a supervisory alarm to the building's alarm panel, then the adjacent spaces do not need carbon monoxide alarms.

F) Protection for Room Mounted Fossil-Fuel Burning Equipment
When the only source of carbon monoxide is from roof-mounted fossil-fuel burning equipment that sends air to common areas only, then the duct must have a CO gas detection device (on the discharge side of the air handling unit) that sends a supervised alarm to the building's system at 50 PPM and the unit must automatically shut-off. Alternatively the sensor can be on the floor closest to the roof-handling unit.

The automatic shutdown requirements in technical options C & F are not applicable to standby or emergency systems.